

DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

INTRODUCTION

The DHCD Design & Construction Guidelines and Standards are posted here to aid the designer of DHCD-funded projects to quickly develop acceptable solutions to the design challenges they face by showing the designer what *has* and has *not* worked for us in the past. The standards restrict the designer's choice of solutions, and the designer who proposes a solution which is different from what our experience tells us will work well must explain why the proposed solution will work better than our standard and be more cost-effective and to back up that explanation with data and examples in the field. (Such explanation would be considered part of the basic design fee, not an extra service, and must be provided within the normal design contract timeframe.)

Not all of the forty-three sections named in the Table of Contents have standards associated with them at this time. The Bureau of Housing Development and Construction is just now in the process of producing standards for the first time and expect to have all the standards on our website by Summer 2007. We also expect that the standards will be continually reviewed and revised as we gain more experience with existing products and techniques and as new products and techniques become available and withstand the test of time.

Your feedback on these standards (format or content) is most welcome. We would be particularly interested in designers who would like to share with us materials or design details which you have found to be extremely reliable and cost-effective over several years of use and observation. Please email all suggestions or comments to me at the address shown below. Thank you for your interest in DHCD-funded work.

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The Design and Construction Guidelines and Standards are DHCD's technical recommendations regarding materials, products, and installation, relevant to the development of construction specifications. Construction Standards summarizes what works and what does not in order to promote high quality construction that reduces initial costs without compromising long-term economies.

USING CONSTRUCTION STANDARDS

These Standards provide useful information when making detailed, technical decisions about material, design, and installation. Architects and engineers are the primary audience. The information presented contains technical language that may be unfamiliar to those who are new to construction.

This is not an outline specification, but rather a reference source for Designers in the preparation of construction documents. Most of the standards are stated in the form of recommendations. Recognizing that each project has a unique context, alternative solutions to illustrate how a high level of construction quality can be achieved in different contexts and circumstances may be shown. There are a few instances where a particular design solution is mandatory because DHCD experience suggests that one solution far outweighs the value of the others. In these rare instances, it is not DHCD's intention to stifle creativity, but the burden of proof that alternative approaches should be allowed rests with the person or persons proposing the change. Any costs associated with producing this proof are the responsibility of the proposer. DHCD expects the construction of state-aided housing to meet the level of quality described in these Standards. When no specific information is provided, standards of professional practice apply.

Whenever possible, these guidelines provide performance standards and rationales for selecting specific materials and products. In most cases, when the names of certain manufacturers are listed it is to provide examples of the kinds of products that are described. In a few cases, however, a certain product may be called out as mandatory when no other known and tested product meets the desired performance for a particular application.

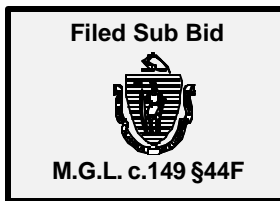
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CODES

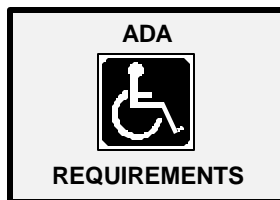
Architects and Engineers are responsible for identifying and addressing all relevant codes and regulations pertaining to the design and construction of buildings. These standards do not identify or interpret code requirements; they do recommend materials and features that are more stringent than applicable codes. These standards are not intended to contradict state codes and regulations. If recommendations in these standards are in conflict with codes or regulations applicable to a particular project, the Designer should bring it to the attention of the DHCD design review architect. However, the Designer is still responsible for producing a design that complies with all codes, regulations, laws, ordinances, and by-laws.

FILED SUB TRADES



When using the standards the following symbol may appear in a section required by a construction contract. M.G.L. c.149 §44F requires Awarding Authorities to make certain trades Filed Sub Trades. These trades are identified by the symbol shown on the left. Specifications for Filed Sub Trades require more administrative attention than the non filed sub trades. For example the specifications must spell out exactly which drawings contain work to be completed by this trade and the work in related sections needs to be spelled out clearly to avoid conflict which usually evolves around a sub bidder claiming work is not required under its section. If there are any questions regarding the requirements of c.149 §44F contact your DHCD Project Manager.

ADA - AAB REQUIREMENTS



Those items that may be seriously impacted by the Americans with Disabilities Act (ADA) or the Massachusetts Architectural Access Board (AAB) are indicated by the symbol shown at the left.

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HOW THE STANDARDS ARE ORGANIZED

These standards consist of sections that are organized as closely as possible to the Construction Specifications Institute (CSI) index. Each section includes the title of the section, the general CSI division to which the section belongs, and the topic areas included within the section. For example, section 07 40 00 Siding is part of CSI's Division 7, Thermal and Moisture Protection and covers within it Vinyl and Polypropylene Siding, Wood Clapboards, Fiber Cement Siding as well as other sidings used on housing. Requirements and recommendations for each of these topic areas is described in terms of materials, design, and execution.

DHCD requires that specification numbers follow the CSI numbers as closely as possible. The actual numbering may differ as long as the specification sections are clearly identifiable. DHCD is collecting cost data from contractors via the break down of their payment schedule of values in accordance with the specification sections. Using this information DHCD will develop a cost database that can be used to establish construction budgets.

The standards include some drawings which describe DHCD's recommendations for the detailing and assembly of building components. The drawings are for illustrative purposes only, and should not be taken as standardized details.

FUTURE UPDATES

The format makes it easy to update the standards. The standards are intended to be redistributed section-by-section as new products, materials, design strategies, and execution methods are developed, as well as when DHCD's evolving programmatic requirements demand their revision. Each section includes a date of issue in the footer. When new sections are distributed, they will be accompanied by an updated table of contents that will also list the date of issue.